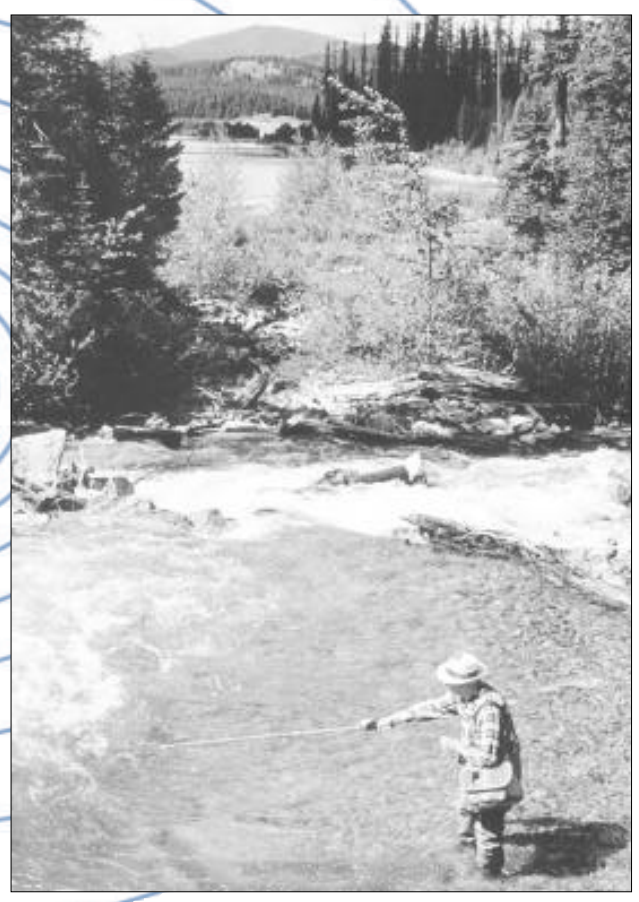
John G. Rogers, Acting Director
Janet L. Miller, Bureau Editor

Some of America's foremost trout streams have been haard hit by whirling disease, but research has been stepped up to address the problem.



Research Stepped Up In Fight Against Trout Whirling Disease

Judy Maule

An intensive cooperative effort to fight whirling disease—a potentially lethal infection that is devastating trout populations in some of America's most renowned streams—will tap the talents of 34 research teams this year, adding new insights to the growing store of knowledge being developed to address this problem.

The decline of wild trout populations is especially critical in the Rocky Mountain West. In recent years, whirling disease has been associated with an estimated 90 percent decline in Montana's upper Madison River wild rainbow trout population, as well as losses in Colorado's South Platte, Gunnison, and Colorado Rivers.

This year's scientific teams will be working in field and laboratory studies to identify better methods for diagnosing whirling disease, collecting samples, and determining fish susceptibilities. The research will also investigate the genetics and ecology of the parasite and its worm host, factors that influence infection (fish age, size, water temperature, and dose), and containment and decontamination procedures.

In addition, the teams will look into sources of parasite transmission, distribution of the parasite in wild stocks, risk assessment methods, and strategies to increase public awareness about whirling disease.

The latest findings on the impact of whirling disease on trout were presented to 120 fish scientists, managers, and policymakers March 6-8 in Logan, Utah, at a symposium co-sponsored by the U.S. Fish and Wildlife Service, the Whirling Disease Foundation, Trout Unlimited, and the Federation of Flyfishers, and others. Thirty papers shed new light on the geographic distribution of the disease, new diagnostic techniques, sensitivities of different fish strains to the disease, and the interactions of the parasite (*Myxobolus cerebralis*) with its fish and worm (*Tubifex tubifex*) hosts.

While a breakthrough has not yet been made to find a solution for dealing with the disease, scientists attending the symposium agreed on several key pieces of the puzzle: 1) the age of fish, dose of infection, and temperature are factors affecting the degree of infection; 2) many trout species and strains are susceptible to whirling disease but research is needed to determine the least susceptible; and 3) non-lethal methods for diagnosing whirling disease need to be developed.

Whirling disease is caused by a microscopic parasite. The spores of *Myxobolus cerebralis*, released when infected fish die, are ingested by Tubifex worms, which live in mud. Inside the worm, the parasite takes on a new form, becoming capable of infecting young salmonids, especially rainbow trout, before their cartilage hardens to bone. *Myxobolus cerebralis* gets into the cartilage near a fish's organ of equilibrium and multiplies very rapidly, sometimes into the millions, pressuring the organ and causing the victim to swim erratically, losing its ability to forage or escape predators.

The whirling disease parasite has been detected in at least 22 states: Alabama, California, Colorado, Connecticut, Idaho, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Utah, Virginia, Washington, West Virginia, and Wyoming.

The 1998 whirling disease symposium is scheduled for February 19-21 in Fort Collins, Colorado. For further information about the symposium, contact the Whirling Disease Foundation, a non-profit organization (P.O. Box 327, Bozeman, MT 59771-0327; E-mail: whirling@mcn.net) whose mission is to raise funds for whirling disease research. Symposium proceedings from the Logan meeting are available for $8 from the Foundation.

NPS Awards

Vicki Boatwright

U.S. Fish and Wildlife Service employees **Gerald J. Vits** and **James P. Oland** are recent recipients of Vice President Al Gore's National Performance Review Hammer Award. The award, named after an infamous $600 hammer purchased by the government in the 1980s, recognizes individuals and organizations for instituting measures to cut red tape and eliminate government waste.

Vits and Oland were part of a multi-agency team made up of employees from the General Services Administration, the U.S. Navy, the Commonwealth of Puerto Rico, the Fish and Wildlife Service, and the National Park Service that successfully disposed of several large parcels of surplus federal land while resolving some long-standing squatter issues and protecting the habitats of several endangered species, including the leatherback sea turtle.

Vits, a realty team leader employed in the Service's regional office in Atlanta, and Oland, an ecological services field supervisor based in Boquerón, Puerto Rico, helped GSA representatives with on-site field visits and provided valuable information about the environmentally sensitive lands proposed for disposition.

The awards, consisting of a framed hammer with a handwritten message from the Vice President and a signed certificate, were presented to Vits and Oland along with other project participants at an April 11 ceremony in Washington, D.C.

National Fishing Week Lures Youth

Judith Maule

More than 500 Washington-area youngsters spent a day fishing on the Mall to kick off National Fishing Week, June 2-8, a nationwide celebration in which an estimated 500,000 Americans participated in thousands of community events that highlight the fun of fishing and foster stewardship of aquatic resources.

On June 2, school children from Virginia, Maryland, and District of Columbia schools tried their luck fishing in a 7-acre lake at Constitution Gardens near the Vietnam Veterans Memorial in Washington, DC. The lake was stocked with channel catfish from the Fish and Wildlife Service's Orangeburg National Fish Hatchery in South Carolina. Bass and bluegills were previously stocked in the lake's shallow waters.

The National Fishing Week kickoff is hosted annually by several Federal agencies, including the Fish and Wildlife Service, National Park Service, Bureau of Land Management, USDA Forest Service, and National Marine Fisheries Service, as well as the District of Columbia Department of Fisheries, the American Sportfishing Association, and industry and conservation groups. These organizations and community partners also sponsor thousands of fishing week events across the Nation during National Fishing Week to celebrate the sport of fishing.

The children began by learning about fish biology and habitat, fishing safety and ethics, and angling techniques from specialists from the sponsoring organizations. Sponsors used the award-winning Hooked On Fishing-Not On Drugs program during this instruction, which culminates with the children's pledge to abstain from drug use. Especially designed for inner-city children and their families, Hooked On Fishing presents fishing as a healthy hobby, promotes interpersonal skills that encourage a drug-free lifestyle, and emphasizes fishing as a sport entire families can enjoy.

Other highlights of the day included casting demonstrations by world-class anglers **Gwenn Perkins**, director of women's outdoor programs at Orvis; and **Steve Pennaz**, host of ESPN's North American Outdoors and editor of *North American Fisherman* magazine, and entertainment from colorful country crooner and avid angler Fishbone Fred and his band from Boca Raton,re Florida.

Photo by Rosa Wilson, NPS

After lunch, provided by Guest Services, Inc., the children participated in a brief ceremony held by the kickoff sponsors, then spent the rest of the afternoon fishing with rods and reels they got to keep for future outings.

Established a decade ago, National Fishing Week is celebrated the first Monday through the following Sunday in June. About 2,500 National Fishing Week events are held annually with an estimated half-million participants nationwide.

Amy Midgett, Firefighter

Tom Crews

Firefighter **Amy Midgett**, a 6-year veteran of the Alligator River National Wildlife Refuge (Manteo, North Carolina) fire crew, has seen a lot of changes in the fire program since it started in 1991.

The year she was hired, the only pieces of equipment available for firefighting were basic hand tools, chain saws, and a truck with a slip-on pumper. At that time, the North Carolina Forest Service was the primary initial attack fire responder and the refuge fire crew was used mostly as a back-up hand crew for mop-up and containment.

Today, Midgett is a member of a well-trained initial attack team capable of fielding a unit of flextracked fire tractors with plows, portable bridge, heavy bulldozer, and fire engines. She and other members of the Alligator River Refuge staff have worked hard to make the needed changes in the evolution of the fire program at the refuge. Midgett also serves on fire crews in the western UnitedStates and other parts of the East.

With high-hazard fuels being the norm for Alligator River and the neighboring refuges, a well-trained and -equipped fire crew is a must for maintaining safety. Refuge lands in Eastern North Carolina have a history of huge fires that burn tens of thousands of acres. These blazes can occur at almost any time of year.

The area's high fire potential and extremely wet soils pose a unique fire problem requiring specialized equipment (such as the low-ground-pressure flextracked fire tractor being operated by Midgett) and well-trained firefighters. It also takes teamwork and close coordination of resources to effectively and safely conduct wildfire suppression operations.

Although the Service is now the initial attack responder on refuge fires, the North Carolina Forest Service is still the Service's primary fire cooperator in Eastern North Carolina. The two agencies maintain very close ties by training together and coordinating activities before and during the peak fire seasons.

Midgett's primary job on the fire crew is as engine boss and assistant crew leader. However, like many of the crew, she has been cross-trained to operate fire tractors in the event of an emergency. Midgett is as comfortable behind the steering levers of a fire tractor as with using a pulaski (a chopping and digging tool) or chain saw.

According to **Mike Bryant**, the manager of Alligator River National Wildlife Refuge, Midgett's experience and hardworking attitude greatly benefit the fire program, especially as it expands to include more and more acres of prescribed burning each year. The Alligator River fire crew will take a primary role in an aggressive 20,000-acre prescribed burning goal for refuges in Eastern North Carolina in 1998.

Tom Crews is the Fire Management Officer at Alligator River National Wildlife Refuge in Manteo, North Carolina.

Pact with Army Improves Habitat on Former Base

Georgia Parham

Bird songs are replacing the sound of exploding ordnance at Jefferson Proving Ground, a 55,000-acre Army installation in southern Indiana closed in 1995 under the Base Realignment and Closure Act. Under an agreement recently forged between the Army and the U.S. Fish and Wildlife Service, Service experts will help the Army assess and manage the base's impressive array of fish and wildlife resources.

"Jefferson Proving Ground has served a key role in preserving democracy and the freedoms we so richly enjoy," said **Major General John Longhouser**, Commanding General, U.S. Army Test and Evaluation Command. "It is time to begin the process of converting this real estate to more peaceful purposes. This agreement provides the opportunity for an enhanced level of ecosystem-based management and study while the Army and the Service address long-term natural resource management."

"This agreement represents a one-of-a-kind opportunity to conserve and manage some of the Midwest's finest forest and grassland habitats," added **John Blankenship**, assistant regional director for the Fish and Wildlife Service. "I commend the Army for its vision in recognizing the value of the resources within the borders of Jefferson Proving Ground."

Under the agreement, the Service will be responsible for evaluating the status of fish, wildlife, and habitats on about 51,000 acres of the base during the next three years. This portion of the installation, used as a firing range while the base was active, is not well-suited for commercial or other uses because of an estimated 1.5 million rounds of unexploded ordnance.

Funding for the Service's activities will be provided by the Army, which retains ownership of this portion of Jefferson Proving Ground. Part of this area is still used by the Air National Guard for training exercises. The remaining 4,000 acres, at the southern end of the base, is being converted to other private and commercial uses. Public use of

From Bombs To Birds

the firing range is limited due to the danger posed by the unexploded ordnance. However, the Army, the Service, and the Indiana Department of Natural Resources are discussing options for possible future use by recreational users.

Jefferson Proving Ground is considered by wildlife managers to contain an extraordinary diversity of wildlife and habitats. The Army regularly used controlled fires to reduce the chance of wildfires touched off by exploding ordnance. These periodic burns mimicked the natural processes that create and maintain prairies. Thus, Jefferson Proving Ground, while not a native prairie, contains exceptionally productive grasslands that support a wide diversity of prairie-dependent birds and other wildlife.

The disappearance of native prairies throughout the country is prompting alarming declines in many grassland-dependent species. Some of these species, many of which are in decline around the country, have found a haven at Jefferson Proving Ground and are beginning to thrive.

One example is the Henslow's sparrow, considered endangered by the State of Indiana and a migratory bird of concern nationally. Jefferson Proving Ground, with 5,000 acres of grasslands in several tracts, supports one of the four largest known populations of Henslow's sparrows, with more than 900 pairs counted during the 1996 breeding season.

Jefferson Proving Ground also contains one of the largest unfragmented blocks of mature forest in the lower Midwest. Such forested areas are increasingly hard to find in this heavily agricultural region, although they provide vital habitat for many wildlife species, including those considered endangered. Jefferson Proving Ground's forests provide summer habitat for the Federally endangered Indiana bat. In addition, the Indiana Department of Natural Resources has released the state-endangered river otter along waterways within Jefferson Proving Ground.

The Service will manage the base's forests and grasslands, develop a plan for Indiana bats and other endangered species, manage and enhance aquatic habitats, and promote public understanding and awareness of the area's natural resources.

Atlanta Celebrates Earth Day

Wildlife Inspector Debbie Bossie shows visitors samples of confiscated endangered and threatened species parts and products while explaining the importance of wildlife laws. Photo by J. Sebo, ZooAtlanta

Evelyn Nelson

From Zoo Atlanta's Flamingo Plaza, **Atlanta Mayor Bill Campbell** declared April 22, 1997, Earth Day in Atlanta, Georgia, and presented a copy of the city's signed proclamation to Acting Fish and Wildlife Service Southeast **Regional Director Sam Hamilton** and Zoo **Director Dr. Terry Maple**. Using the theme Planet Earth—The Time Is Now, government agencies and private conservation organizations gathered at the zoo to participate in the day-long expo highlighting the importance of conserving Earth's resources.

More than 2,000 schoolchildren toured the colorful displays promoting the message that natural resources conservation is everyone's responsibility. **Speaker of the House Newt Gingrich** led a group of third-graders on a tour of the exhibits. Zoo officials reported the highest Earth Day attendance in five years.

The U.S. Department of Agriculture's Forest Service used the occasion to introduce its recreated **Woodsy Owl** character. The zoo's distance learning program focused on the history of conservation in America, including the first Earth Day celebration. There were wildlife shows and games focusing on refuges and migration. At the Service's exhibit of confiscated endangered and threatened species parts and products, a wildlife inspector taught the public about wildlife protection laws.

Among the Federal and state agencies, corporations, and private conservation organizations participating in the event were The Georgia Conservancy, Georgia Department of Natural Resources, the National Park Service, Environmental Protection Agency, USDA Forest Service, The Nature Conservancy, Save the Manatee Club, Urban Resources Partnership, Georgia-Pacific Corporation, the U.S. Army Forces Command and the U.S. Department of Energy. The event was co-sponsored by the Fish and Wildlife Service and ZooAtlanta.

Minerals Management Service

Cynthia Quarterman, Director
Rolando Gächter, Bureau Editor

Outreach Can Be Fun

Earth Fest volunteers enjoyed the fun and sun at New Orleans Audubon Zoo while educating the public about the MMS. Gulf Region office employees **Wanda Kraemer**, **Jay Cheramie**, **Kenneth Colwart**, **Albert Naquin**, **Lance Belanger**, **Debra Andrews**, **Elizabeth Peuler**, **Sandra Pavlas**, **Michael Saucier**, **Darrell Griffin**, **Bradley Hunter**, **Janice Todesco**, **Troy Trosclair**, **Kewen Huang**, **Karen Misconish**, student volunteer **Nicole Lorraine**, and **Caryl Fagot**, who coordinated the effort, gave up their weekend to help celebrate the New Orleans version of Earth Day last month along with a record crowd of almost 30,000 visitors.

Troy Trosclair, right, production engineer with the Houma District and Earth Fest volunteer, points out species of mammals found in the Gulf of Mexico

Staffers handed out *Whales and Dolphins of the Gulf of Mexico* mini-posters, bags, and brochures. They also debuted the hands-on *Drilling for Oil* game. In a simulated activity, kids and adults alike tried to find the oil deposit below the surface of the ocean floor. The participants were both enthusiastic and determined and kept coming back to play again and again. They also played the zoo sponsored Earth Quest game by answering MMS's question about the kinds of marine life found beneath a platform. Staffers used the exhibit's colorful underwater photos to illustrate actual examples of life around a platform. This is the fifth year the Gulf Region office has joined with other federal, state, and local agencies, businesses and community groups in the celebration. The office is grateful to all those who gave their time to make this exhibit the a success.

Meanwhile, on the Internet

The MMS Pacific Region showcased its Santa Barbara Channel- Santa Maria Basin Circulation Study through an online exhibit at the Agriculture and Living Sciences Career Day in Ventura, California. With help from the Information Superhighway, students and their teachers saw real-time oceanographic data while oceanographers discussed how they analyze and use real-time wind and current data to promote environmental safety in federal waters along California. The event was Coordinated by the University of California Cooperative Extension of Ventura County, to promote awareness of the agricultural, natural resources, and environmental sciences, and their related industries.

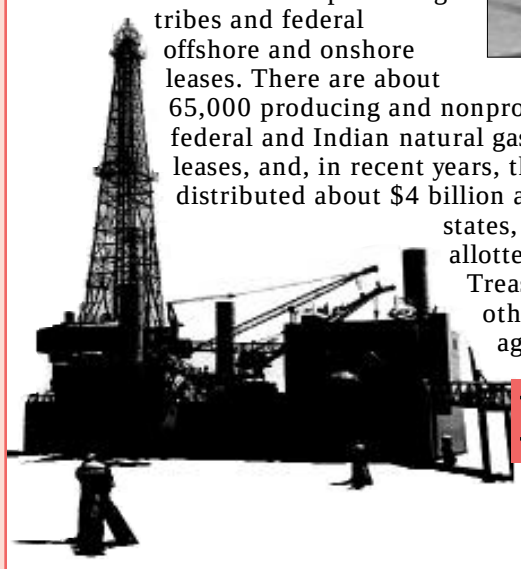
In addition, the Pacific Region's Office of Environmental Evaluation highlighted the MMS Environmental Studies Program at the 6th annual Oxnard High School EarthBound Exhibition. MMS environmental scientists spoke to students about active studies being conducted along the California coast and how these studies will help MMS manage the Pacific Outer Continental Shelf.

MMS MARKS 15TH YEAR

"The hallmark of this agency has been its ability to evolve in response to changing economic and business climates," MMS **Director Cynthia Quarterman** said in her keynote speech at the Offshore Technology Conference. "During its first 15 years, MMS's Royalty Management Program has matured from a collection agency into a world-class financial manager, and the Offshore Minerals Management Program, once purely process-driven, has grown into a dynamic resource manager."

This year's 15th anniversary of the founding of MMS coincides with the 50th anniversary of offshore development and during her participation at the Offshore Technology Conference, held in Houston from May 5-8, the director reflected on the bureau's milestone by reviewing some of its major accomplishments and outlining its plans for the future.

"MMS has forged a record of achievements, and expects to become the best mineral resource manager," Quarterman said. The Royalty Management Program administers revenues for nearly 20,000 individual allottees and 34 mineral-producing tribes and federal offshore and onshore leases. There are about 65,000 producing and nonproducing federal and Indian natural gas and oil leases, and, in recent years, the program distributed about $4 billion annually to states, tribes, allottees, the U.S. Treasury, and other federal agencies.



Other areas where the Royalty Management Program has shown excellence and efficiency are in forming network links to states and tribes, implementing the Federal Oil and Gas Royalty Simplification and Fairness Act, and developing alternate dispute resolution techniques. The program also revised its policies to simplify reporting and payments and speed the flow of revenue to bureau customers.

With near-record production of offshore natural gas and rising production of offshore oil, revenue is increasing. Over the past several years, the Offshore Minerals Management Program has moved to a more focused leasing program with an emphasis on the safe and environmentally sound development of about 6,500 leases and has redirected critical resources to respond to the unique requirements among the Alaska, Gulf of Mexico, and Pacific regions.

"We look forward to the next 15 years as we work to understand and evaluate new technological issues, economic risks, and, especially, environmental concerns," Quarterman added. "I am personally very excited about the opportunities and challenges that face both the offshore oil and gas industry and MMS regulators. We look forward to continuing our work with industry representatives. We have been a tough, but fair regulator over the years."

Energy Center Debuts

MMS Assistant to the director, **Dr. Robert W. (Bob) Middleton**, participated in the grand opening ceremony for Galveston's new Offshore Energy Center. After serving as a movable offshore drilling unit for almost 30 years, the Ocean Star began its service as the Center this past April. The former drilling unit is now permanently berthed at Pier 19 in Galveston, Texas.

Members of the Galveston Chamber of Commerce with Bob Middleton, third from left, and Dillard Hammett, second from left, a member of the Center's Board of Directors. Photo by Mieko Mahi of Mieko Photography and Video

At the rechristening of the Ocean Star, Middleton cited the rich potential of the offshore oil and gas industry to provide jobs and energy for our nation. Middleton said the Energy Center would be both a major new attraction for Galveston and a means to educate the public about the safe and environmentally sound development of offshore energy resources. Other dignitaries, including **Congressman Nick Lampson** (Texas), agreed with Middleton's comments.

At the Center, visitors can experience the full range of day-to-day activities—offshore drilling and production, marine transportation, environmental protection, construction, pipelining—through videos, equipment exhibits, and interactive displays. Among the exhibits is the MMS Interactive vieo entitled *Future Choice*. The MMS Is also proud to have provided the OEC with the photos for use throughout the museum, and to have the agency seal displayed as an in-kind donor. It is open to the public daily from 10 a.m. to 5 p.m.

Recognizing a Lifetime of Western Conservation

Assistant Secretary Bob Armstrong recently received The Nature Conservancy of Texas Lifetime Achievement Award.

The Nature Conservancy of Texas has presented its Conservation Lifetime Achievement Award to **Bob Armstrong**, Interior's assistant secretary for Land and Minerals Management. The honor took place at the Conservancy's 1997 Conservation Awards Luncheon in Austin.

Armstrong, only the third individual to win the prestigious award, joins distinguished company. Previous winners of the private, non-profit group's award include former First Lady **Lady Bird Johnson** and former Texas **Congressman J.J. Jake Pickle**.

The Nature Conservancy of Texas has been presenting its Conservation Lifetime Achievement Award since 1993 to individuals and corporate citizens whose leadership sets an outstanding example in environmental conservation and who have demonstrated a lifelong commitment to protecting and preserving our natural heritage. The award also honors those who appreciate the integral role the environment plays in Texas' economic vitality and quality of life.

For the past 20 years, Armstrong has worked to encourage protection of critically important sites in Texas by both public and private organizations. The acknowledged "Father of Big Bend Ranch," Armstrong earned his moniker while serving as commissioner of Texas' General Land Office. In that position, he championed the acquisition of land now known as the Big Bend Ranch State Natural Area. In doing so, he repeatedly butted heads with the Texas legislature and various special interests. Finally, in 1988, the State of Texas secured an initial 216,000 acres of land for $8.8 million and has enlarged the park to 287,000 acres since then.

We at MMS congratulate Bob for his achievements.

MMS Employees Enjoy a Day in the Sun

Stephen Shaffer

More than 300 Washington area MMS employees recently celebrated the first annual MMS Employee Appreciation Day at Northern Virginia's Algonkian Regional Park.

MMS employees were treated to a barbecue lunch and enjoyed the opportunity to recognize some of their colleagues' outstanding accomplishments in teamwork and innovation during the awards ceremony. Director Cynthia Quarterman and MMS Employee Association spokesperson **Dora Hardy** promised the headquarters' celebration would be an annual event.

With hundreds of flying frisbees, MMS employees participated in many events such as golf, fishing, horseshoes, and volleyball. More than 70 people completed the one-mile fun run and walk. More than a dozen teams competed in the MMS Team Olympiad which consisted of the dreaded three-legged race, the always wet-water balloon relay, and the ever dangerous wagon-pull race. However, the most challenging and controversial event by far was the tug-of-war.

With spirits running high, the teams have already begun to organize and plan for next year's Employee Appreciation Day. "It was fun seeing all the folks let their hair down and have a good time," a participant observed. An MMS manager was heard warning another group that her team would take top honors next year.

"It was a great day to show our appreciation and give back to our hard-working MMS employees," said Director Quarterman. "It truly was a wonderful time to laugh and get to know each other better," she added. The week of May 5th was officially designated as National Federal Employee Recognition and Appreciation week.

MMS' Western Administrative Service Center Employees Honored, Page 2.

In the tug-of-war competition, at top, the Information Technology Division team pulls to victory. Team anchor Gig Kocher helps team mates Kevin Spaner, Judy Mork, and Margaret Wiese. Above, Leasing Division-Team LD includes, front row left to right, Kim Coffman, Stephen Shaffer, Ralph Ainger, Alice Drew. Back row left to right, Jan Arbegast, Kent Dirlam, Jane Roberts, Dan Henry, Renee Orr, Margaret Clark, Bill Quinn, Karen Smith-Monds, and Rasa Kregzdys. At right, Intermar's Joanne McCammon helps prepare the barbecue lunch for more than 400 of her fellow MMS employees.

Weaver H. McCracken Offshore Pioneer

Bill King

When you think of a pioneer from the Smoky Mountains of Haywood County, North Carolina, you probably think of a buckskin-clad mountain man with a coonskin cap and flintlock rifle. But **Weaver McCracken** is a different breed—a pioneer of offshore oil discovery in the Gulf of Mexico.

"It was back in '48, not long after the end of World War II," McCracken recalled. "Chevron, then the Standard Oil Company of California, set three platforms in the Bay Marchand Area in open water about a mile offshore. The workers were quartered in a war surplus LST (tank landing ship), anchored adjacent to the active platform. Those, who like me, have spent time on a World War II vintage LST know what floating palaces they are," said McCracken.

On shore, in East Texas and Louisiana, salt domes had historically been good places to strike oil. So Chevron drilled into a deposit of pinch out sands butting against a salt dome offshore. The first well, drilled from the A Platform, came up dry.

McCracken, a geologist, served as Chevron's watcher on the B Platform, reviewing the work of Noble Drilling Company, the contractor on the *Offshore Pioneer* project. "It was a fairly ticklish business since drilling through the cap rock and porous sand layers and into the salt beneath would contaminate the drill muds and make the well tricky to control," McCracken said. "At about 4,000 feet the 'mud loggers' noticed the first indications of oil-bearing sediments. They brought up the core of rock and material through which the well had been drilled." Core analysis verified that well B had struck the first commercial quantity of offshore oil in the Gulf of Mexico.

The Bay Marchand Field has gone on to produce more than half a billion barrels of oil. From there, exploration soon pushed farther offshore into federal waters which are now managed by the Department's Mineral's Management Service.

Since 1948, the Gulf of Mexico as a whole has produced more than 13 billion barrels of oil and well over 100 trillion cubic feet of natural gas. The market value of that product exceeds $325 billion and has generated more than $90 billion for the U.S. Treasury. Gulf offshore oil and gas activities are enjoying a resurgence of activity as technology in the form of 3-D (dimensional) seismic survey techniques and innovative platform designs for deep water have uncovered new opportunities for extracting the oil and now highly-valuable, clean-burning natural gas lying beneath the Gulf's waters.

Some people think country boys don't get much education, but Mr. McCracken spent two years at Western Carolina University then finished his bachelors degree at the University of Alabama. It was 1942 and the Navy grabbed him for four years of service. After his discharge, he took a master's degree at the University of Texas.